

Claims

1. The use of a physiologically acceptable manganese (II) compound and an uptake promoter in the form of one or
5. more amino acids for the manufacture of an MRI contrast composition for oral administration and MRI examination of the liver, in a ratio of Mn to promoter higher than that at which coordination compounds between Mn and promoter are formed to a substantial degree.
- 10 2. The use according to claim 1, wherein the molar ratio of Mn to promoter is at least about 2:3.
3. The use according to claim 2, wherein said ratio is at
15 most about 3:1.
4. The use according to any one of claims 2 and 3, wherein said ratio is higher than about 2:3.
- 20 5. The use according to claim 4, wherein said ratio is at least about 1:1.
6. The use according to claim 5, wherein said ratio is at least about 2:1.
- 25 7. The use according to any one of the preceding claims, wherein the dosage of manganese is in the range of from about 25 to about 150 $\mu\text{mol/ kg}$ body weight.
- 30 8. The use according to claim 7, wherein the dosage of manganese is in the range of from about 50 to about 125 $\mu\text{mol/ kg}$ body weight.
9. The use according to claim 8, wherein the dosage of
35 manganese is in the range of from about 50 to about 100 $\mu\text{mol/ kg}$ body weight.

10. The use according to any one of the preceding claims, wherein the uptake promoter is selected from the group consisting of alanine, valine, leucine, tryptophan, methionine, isoleucine, proline, phenylalanine, serine, glycine, threonine, cysteine, asparagine, glutamine, tyrosine, aspartic acid, glutamic acid, arginine, lysine and histidine.
11. The use according to claim 10, wherein said promoter is selected from neutral amino acids including asparagine and aspartic acid.
12. The use according to claim 11, wherein said promoter is L-alanine.
13. An MRI contrast medium composition for oral administration for examination of the liver comprising as an active ingredient a physiologically acceptable manganese (II) compound and an uptake promoter comprising one or more amino acids wherein Mn and the promoter are used in a molar ratio higher than that at which coordination compounds between Mn and promoter are formed to a substantial degree.
14. A composition according to claim 13, wherein said ratio is as defined in any one of claims 2 to 6.
15. A composition according to claim 13 or 14, wherein the dosage of manganese is as defined in any one of claims 7 to 9.
16. A composition according to any one of claims 13-15, wherein said uptake promoter is as defined in any one of claims 10-12.
17. An MRI contrast medium kit comprising a first container accommodating a physiologically acceptable

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manganese (II) compound, and a second container
accomodating an uptake promoter comprising one or more
amino acids, and optionally, instructions for the use of
the kit, the molar ratio of Mn to promoter being within
5 the range of about 2:3 to about 3:1.

18. A kit according to claim 17, wherein said molar
ratio, the dosage of manganese and/or said uptake
promoter is (are) as defined in any one of claims 4-12.
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19. A method for MRI of a mammalian liver using an MRI
contrast medium composition according to any one of
claims 13-16, said method comprising oral administration
of an effective amount of said contrast medium
15 composition.